1. List the members of your group below. Underline your name.

2. Provide a SQL script that creates tables `Accts(id, name, address)` and `Images(id, acct, size, loc)` for storing information on images (e.g., JPEG files) and the accounts to which they belong. Use suitable key and not-null constraints, and a constraint to ensure that image sizes are in the range (0, 1000]. Add statements to ensure that only accounts that own at least one image appear in `Accts` and, conversely, only images associated with a known account appear in `Images`. Also add statements to ensure that the total size of all images for any account is at most $10^6$. Finally, include statements to insert one account tuple and one image tuple.
3. Explain how the aggregate image size constraint of Question 2 may be enforced at the DBMS-level (not application level) by a database system that does not support SQL assertions, but that does support triggers.
4. Consider the following Datalog program and database instance:

\[
\text{rpath}(x, y) \leftarrow \text{Edge}(x, y, \text{red}).
\]
\[
\text{rpath}(x, y) \leftarrow \text{rpath}(x, z), \text{rpath}(z, y).
\]

(a) Exhibit a minimal fixedpoint and a non-minimal fixedpoint for \text{rpath}.

(b) Treating the Datalog rules as logical sentences (\leftarrow being the logical if), exhibit a non-minimal model and a minimal model that satisfies these sentences.

\[
\begin{array}{|c|c|c|}
\hline
\text{S} & \text{D} & \text{color} \\
\hline
1 & 2 & \text{red} \\
1 & 5 & \text{green} \\
2 & 3 & \text{green} \\
2 & 4 & \text{red} \\
3 & 1 & \text{red} \\
3 & 2 & \text{blue} \\
3 & 4 & \text{green} \\
4 & 1 & \text{red} \\
5 & 3 & \text{red} \\
\hline
\end{array}
\]
[additional space for answering the earlier question]